REMARKS/ARGUMENTS

The indication of allowable subject matter in Claims 19 and 23 is acknowledged with appreciation. By this response, Claim 19 has been amended into independent form to place the claim in condition for immediate allowance. Additionally, Claim 21 has been amended to incorporate the subject matter of dependent Claims 22 and 23, which have been cancelled. Accordingly, Claim 21 should be in condition for immediate allowance.

Independent Claims 1 and 17 have been amended to more clearly define Applicant's invention and distinguish it from the cited prior art. Favorable reconsideration of these claims and the claims dependent therefrom are respectfully solicited in view of the remarks which follow. Several of the dependent claims have also been amended in light of the amendments to the independent claims.

It is believed that the foregoing amendments have overcome the 35 U.S.C. § 112 deficiency noted in the Official Action.

As now presented, Claim 1 defines the composite support as comprising a spunbond nonwoven fabric first layer formed of continuous thermoplastic polymer filaments, including matrix filaments and binder filaments of a lower melting thermoplastic polymer composition. Additionally, the composite support includes a wetlaid nonwoven fabric second layer formed of discrete length thermoplastic polymer fibers, including matrix fibers and binder fibers of a lower melting thermoplastic polymer composition. As is further defined in dependent Claim 2, the thermoplastic polymer binder filaments and the thermoplastic polymer binder fibers are formed of the same thermoplastic polymer composition and serve for bonding the first and second layers to one another.

The structure as defined in amended Claim 1 and the claims dependent therefrom is neither taught nor rendered obvious by the cited prior art. The Shinjou et al. reference describes a composite membrane support that includes a low density layer of carded or airlaid polyester fibers laminated to a high density layer which can be formed of meltblown microfibers. The meltblown high density layer of the Shinjou et al. reference does not correspond to the spunbond nonwoven fabric first layer recited in Claim 1. The spunbond nonwoven fabric first layer includes both continuous matrix filaments and binder filaments of a lower melting thermoplastic

composition. In the meltblowing process used by the Shinjou reference, molten polymer is extruded from orifices of a meltblowing die, whereupon high velocity air or other fluid impinges upon the molten polymer, causing it to be attenuated and to form microfibers. These microfibers are not the same as continuous thermoplastic polymer filaments of the spunbond nonwoven fabric layer of claim 1. In particular, contrary to the assertions made by the Examiner in the Official Action, there are indeed structural differences between a spunbond nonwoven and a meltblown nonwoven. Furthermore, as seen from the Attachment enclosed with the previous response, the terms "spunbond" and "meltblown" are understood by those skilled in the art as defining structural characteristics in addition to conveying the method by which the fibers were made. By way of analogy, a "fried egg" and a "scrambled egg" define two distinctly different structures, in addition to conveying the method by which the eggs were cooked. The two kinds of egg have distinctly different appearance, structure and physical properties. Likewise, the continuous filaments of a spunbond nonwoven fabric have a distinctly different appearance, structure and physical properties from meltblown microfibers as a result of the differences in the manufacturing processes. For example, the continuous filaments of a spunbond nonwoven fabric are attenuated and drawn either mechanically or pneumatically by an attenuation device (draw rolls or a pneumatic aspirator jet) located between the spinneret block and the collection surface. This results in a certain degree of molecular orientation of the polymer chains, making the filaments stronger. In contrast, the meltblown process has jets of air or other high velocity fluid that impinge upon the freshly extruded polymer as it leaves the extrusion die. However, there is nothing downstream of the extrusion die comparable to the attenuation device of the spunbond process for exerting a pulling or drawing force on the fibers. Consequently, the meltblown fibers do not develop the kind of molecular orientation found in spunbond filaments. The meltblown fibers are inherently weaker, as is the resulting meltblown fabric.

For the reasons noted, Claim 1 and the claims dependent therefrom clearly distinguish over the cited Shinjou et al. reference.

Likewise, independent Claim 17 distinguishes over the structure of the Shinjou reference. In addition to the above-noted differences concerning the structural difference between a spunbond nonwoven fabric layer and the meltblown layer of the Shinjou reference, Claim 17 as

now presented specifies that the polyester polymer binder present in the first and second layers comprises a polyester copolymer composition having a lower melting temperature than the polyester polymer of the fibers and filaments. This is not taught nor rendered obvious in the Shinjou reference or the other prior art of record. Accordingly, Claims 17 and 18 patentably distinguish over the prior art and the rejections should be withdrawn.

Turning now to the Dijkema et al. reference, this reference has been applied against the claims both under 35 U.S.C. § 102(b) and under 35 U.S.C. § 103 as to Claim 11. Reconsideration by the Examiner and withdrawal of this rejection are solicited. The Dijkema et al. reference describes a laminate of a spunbond nonwoven fabric and a wetlaid fabric. The spunbond nonwoven is formed from bicomponent filaments having a core-skin structure with a higher melting core component and a lower melting skin or sheath component that serves as a binder. There is no teaching or suggestion of a spunbond nonwoven fabric of the type claimed in the claims of record, including both continuous matrix filaments and binder filaments of a lower melting thermoplastic polymer composition. There is also no teaching or suggestion of having thermoplastic binder filaments and thermoplastic polymer binder fibers formed of the same thermoplastic polymer composition as defined in Claim 2.

As for Claim 17, this claim recites the presence of a polyester polymer binder present in both the first and second layers and wherein the polyester polymer binder comprises a polyester copolymer composition having a lower melting temperature than the polyester polymer of the fibers and filaments. The Examiner has indicated in the reasons for allowance of Claims 19 and 23 that this aspect is not taught by the references. Accordingly, Claims 17 and 18 should be in condition for allowance.

Claims 1, 2, 4-7 and 9-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schortmann U.S. Patent No. 5,204,165. Reconsideration by the Examiner and withdrawal of this rejection are respectfully solicited. It is submitted that this rejection is no longer applicable to the claims as amended. Specifically, the Examiner notes that this reference teaches a composite including a spunbond layer and a wetlaid layer, as well as a thermoplastic binder. However, as taught at Col. 4, lines 4-17, the binder in Schortmann is a liquid composition that is added to the previously formed web by methods such as foamed emulsion, gravure roll,

spraying, padding, etc., followed by heating to dry the binder emulsion. There is no teaching or suggestion of binder filaments and binder fibers as recited in claim 1. It should be evident that the teachings of the Schortmann reference do not anticipate or render obvious the composite support as defined in independent Claim 1 and the claims dependent therefrom.

In view of the amendments and the foregoing remarks, it is submitted that all the claims of the present application as now presented are in condition for immediate allowance. Reconsider by the Examiner and formal notification of the allowability of all claims as now presented are solicited.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

Raymond O. Linker, Jr.
Registration No. 26,419

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

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Janet F. Sherrill

December 13, 2005
Date